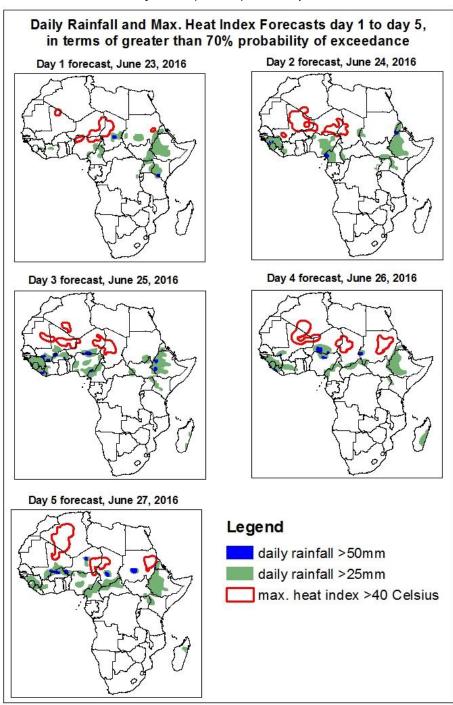
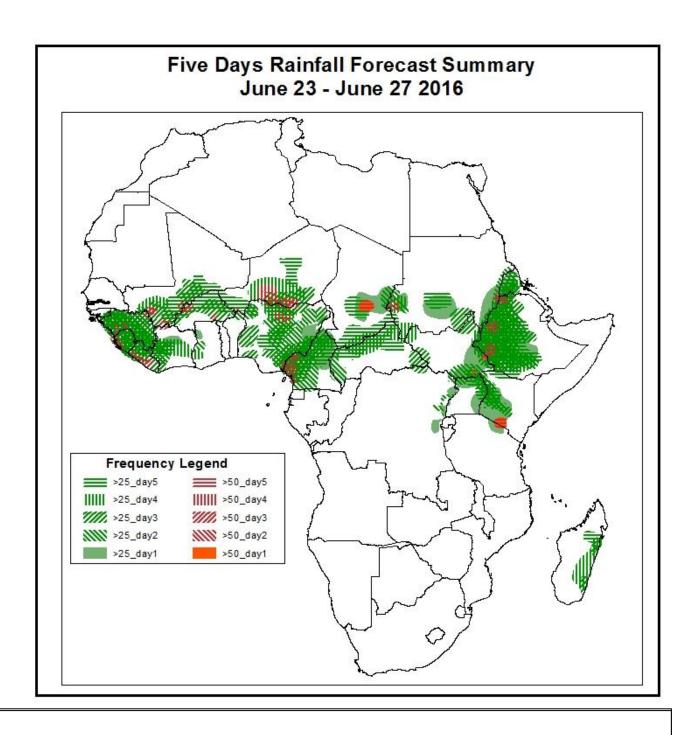
- 1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on June 22, 2016)
- 1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: June 23– June 27 2016)

  The forecasts are expressed in terms of high probability of precipitation (POP) and high probability of maximum heat index, based on the NCEP/GFS, ECMWF and the NCEP Global Ensemble Forecasts System (GEFS) and expert assessment.



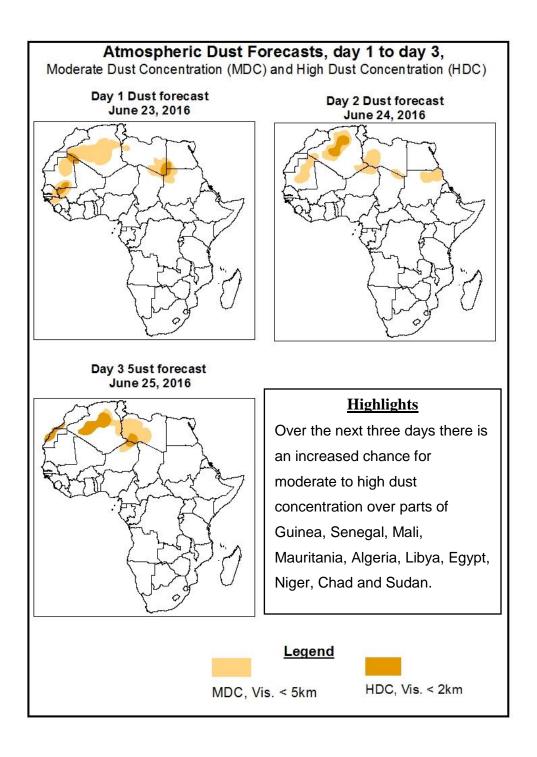


# <u>Highlights</u>

Over the next five days, lower level-wind convergence associated with the West African monsoon flow, combined with westward propagating convective systems across Central and West Africa are expected to enhance rainfall in the regions. Active Congo Air Boundary (CAB) in the Lake Victoria region and local wind convergences across the Horn of Africa are also expected to enhance rainfall in their respective regions. Therefore, there is an increased chance for two or more days of moderate to heavy rainfall over Guinea Conakry, Sierra Leona, Liberia, local areas of southern Mali, western Cote d'Ivoire, Burkina Faso, portions of Nigeria, western and northern Cameroon, local areas of southern Chad, northern CAR, local areas in Sudan, southeastern South Sudan, northern and eastern Ugandan, western Kenya, Eritrea and western Ethiopia.

## 1.2. Atmospheric Dust Concentration Forecasts (valid: June 23 – June 25 2016)

The forecasts are expressed in terms of high probability of dust concentration, based on the Navy Aerosol Analysis and Prediction System, NCEP/GFS lower-level wind forecasts and expert assessment.



#### 1.3. Model Discussion, Valid: June 23-June 27 2016

The Azores high pressure system over the Northeast Atlantic is expected to intensify, with its central pressure value increasing from 1024hPa to 1028hPa through 24 to 48 hours, and then it tends to maintain an average central pressure value of 1032hPa through 96 to 120hours.

The St. Helena High pressure system over the Southeast Atlantic Ocean is expected to weaken, with its central pressure value decreasing from 1030hPa to 1024hPa through 48 to 72 hours, and then it tends to maintain an average central pressure value of 1032hPa through 92 to 120hours.

The Mascarene high pressure system over the Southwest Indian Ocean is expected to maintain an average central pressure value of 1032hPa through 24 to 72hours, and then it tends to weaken, with its central pressure value decreasing from 1034hPa to 1032hPa through 96 to 120 hours.

The 1016hPa isobar, associated with the East African ridge is expected to extend northwards up to northern Kenya through 48 to 120hours. The anticyclonic ridge associated with the St. Helena high pressure system is expected to extend northwards across the Atlantic Ocean, with the 1016hPa isobar reaching the Gulf of Guinea coast during the forecast period. This may lead to increase in rainfall across portions of West Africa.

The central pressure values associated with the heat low in western Sahel is expected remain in the range between 1005hPa and 1010hPa during the forecast period, while the heat low over the central Sahel is expected remain in the range between 1008hPa and 1009hPa though 24 to 48 hours and then it tends to maintain an average central pressure value of 1004hPa through 72 to 120hours. The central pressure value associated with the heat low across Sudan is expected remain in the range between 1004hPa and 1007hPa during the forecast period.

At 925HPa level an anticyclonic circulation and its associated ridge is expected to prevail across Libya and the neighboring areas during the forecast period. Strong wind may lead to

moderate to high dust concentration across portions of in Guinea, Senegal, Mali, Mauritania, Algeria, Libya, Egypt, Niger, Chad and Sudan.

At 850hPa level, a strong zonal wind convergence is expected to prevail in the region between Mali and Sudan, while a dry northerly flow is expected to prevail across the western end of West Africa at 48to 120 hours.

At 700hPa level, northeasterly to easterly flow is expected to prevail across much of the Gulf of Guinea region, with wind speed occasionally exceeding 30kts over local areas in the Gulf of Guinea region during the forecast period. This will help to propagate convective activities southwestward into the western portions of the Gulf of Guinea region.

Over the next five days, lower level-wind convergence associated with the West African monsoon flow, combined with westward propagating convective systems across Central and West Africa are expected to enhance rainfall in the regions. Active Congo Air Boundary (CAB) in the Lake Victoria region and local wind convergences across the Horn of Africa are also expected to enhance rainfall in their respective regions. Therefore, there is an increased chance for two or more days of moderate to heavy rainfall over Guinea Conakry, Sierra Leona, Liberia, local areas of southern Mali, western Cote d'Ivoire, Burkina Faso, portions of Nigeria, western and northern Cameroon, local areas of southern Chad, northern CAR, local areas in Sudan, southeastern South Sudan, northern and eastern Ugandan, western Kenya, Eritrea and western Ethiopia.

There is an increased chance for maximum heat index to exceed 40°C over local areas in Mauritania, Mali, Algeria, Niger, Chad, and Sudan.

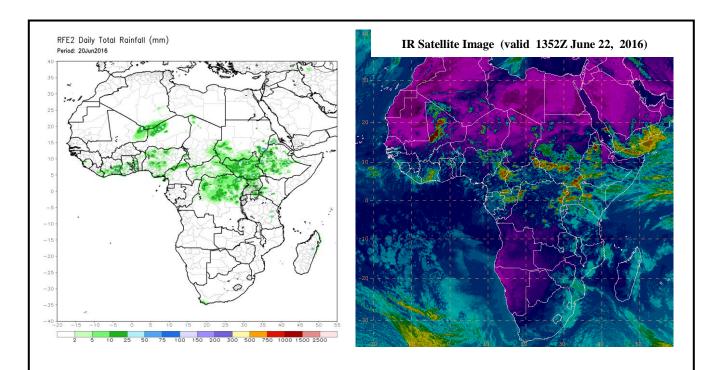
## 2.0. Previous and Current Day Weather over Africa

### 2.1. Weather assessment for the previous day (June 21, 2016)

Moderate to locally heavy rainfall was observed over eastern Liberia, southern Cote d'Ivoire, local areas of northeast Mali and Niger, local areas of southern Ghana, Togo, portions of Nigeria, Northern Cameroon, portions of CAR, South Soudan, local areas of southern Sudan, northern DRC and, and portions of Uganda and Ethiopia.

## 2.2. Weather assessment for the current day (June 22, 2016)

Intense convective clouds are observed over local areas of northern Mali, northern Cameroon, northern and southeast South Sudan, local areas of DRC, portions of Uganda, and portions of Ethiopia.



Previous day rainfall condition over Africa (Left) based on the NCEP CPCE/RFE and current day cloud cover (right) based on IR Satellite image.

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